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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,612	03/29/2004	Munehiko Fukase	3520.106	9706
59866	7590	08/17/2006	EXAMINER	
EDELL, SHAPIRO & FINNAN, LLC			JIMENEZ, MARC QUEMUEL	
1901 RESEARCH BLVD.			ART UNIT	PAPER NUMBER
SUITE 400				3726
ROCKVILLE, MD 20850-3164				

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,612	FUKASE ET AL.	
	Examiner Marc Jimenez	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1-11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “the ceramic being formed from 100 parts by weight of an inorganic binder”. It is unclear how a ceramic could be formed from an inorganic binder. Does this limitation mean that ceramic includes a binder that is 100 parts by weight? If so, it is unclear whether the 100 parts by weight content is with respect to an entire content or with respect to the amount of ceramic alone. For example, is the weight percent based on the total solids materials such as fibers?

Claim 1 recites “the cylindrical layer being made of a ceramic with a low bulk density of 0.2 to 1.5 g/cm³”. It is unclear whether the cylindrical layer as a whole has the claimed bulk density or just the ceramic material has a bulk density claimed.

Claim 5 recites “the shafts” which lack proper antecedent basis because claim 1 recites “a shaft”.

Claim 11 recites “having grooves or concavities and convexities”. It is unclear whether

this limitation means that the cylindrical layer could have: a) grooves alone b) both concavities and convexities or c) grooves and concavities. It is difficult to determine the specific alternative terminology combination that is being claimed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 11-12** are rejected under 35 U.S.C. 102(b) as being anticipated by Takei et al. (US5893210).

Regarding claim 12, Takei et al. teach a ceramic roller which comprises a cylindrical layer **13** formed in a cylindrical shape having a hollow shaft-hole (see figure 3), a pair of shafts **12**, one of which has the top-end thereof protruding externally from the cylindrical layer **13** and has the other end fixed in the cylindrical layer **13**, the shaft hole forming a hollow portion between the ends of both the shafts **12**, and a surface layer **14** formed on the outer peripheral surface of the cylindrical layer **13**.

Regarding claims 11, as best understood, see figure 7 where there are embedded fibers **36** on the surface. Therefore, there are grooves to accommodate the fibers **36**.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3, 9 and 10** as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. (US4533581) in view of Shorr (US3877919).

Asaumi et al. teach a ceramic roller which comprises a shaft (col. 1, lines 14-15) and a cylindrical layer, “at least part” of the cylindrical layer (col. 3, lines 59-61, the discs form a cylindrical layer) being made of a ceramic (col. 3, line 28, a fiber is a “part” of the cylindrical layer), with a low bulk density of 0.2 to 1.5 g/cm³ (col. 3, lines 67-68), the ceramic being formed from 100 parts by weight of an inorganic binder (col. 2, lines 55-68, see also the abstract).

Asaumi et al. teach the invention cited above with the exception of having a surface coating.

Shorr teaches a similar roll to Asaumi et al. with a surface coating (see figures 4a-4c).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al. with a surface coating, in light of the teachings of Shorr, in order to increase traction as suggested by Shorr (col. 6 lines 31-35).

Regarding claims 2-3, Asaumi et al. teach using the same “inorganic binder”, for example, “colloidal silica” which is what applicant uses (described on page 16, lines 8-17 of the

Art Unit: 3726

instant specification). Therefore, Asaumi et al. is considered to meet the claimed heat capacity and thermal conductivity.

Note also from MPEP 2112.01:

"Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) (Applicant argued that the claimed composition was a pressure sensitive adhesive containing a tacky polymer while the product of the reference was hard and abrasion resistant. "The Board correctly found that the virtual identity of monomers and procedures sufficed to support a *prima facie* case of unpatentability of Spada's polymer latexes for lack of novelty.").

Regarding claims 9-10, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

7. **Claims 4-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. in view of Shorr as applied to claim 1 above, and further in view of Takei.

Regarding claim 4, Asaumi et al./Shorr teach the invention cited above with the exception of having grooves or convexities and concavities.

Takei teaches in figure 7, embedded fibers **36** on the surface. Therefore, there are grooves to accommodate the fibers **36**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with grooves, in light of the teachings of Takei, in order to accommodate reinforcing fibers.

Regarding claim 5, Asaumi et al./Shorr teach the invention cited above with the exception of having shafts.

Takei teaches a pair of shafts **12**, one of which has the top-end thereof protruding externally from the cylindrical layer **13** and has the other end fixed in the cylindrical layer **13**, the shaft hole forming a hollow portion between the ends of both the shafts **12**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with shafts, in light of the teachings of Takei, in order to provide a lighter overall roll weight by providing two smaller shafts rather than one large shaft that extends the length of the roller.

8. **Claims 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. in view of Shorr as applied to claim 1 above, and further in view of Tsukida et al. (US5450181).

Shorr teaches that the surface coating is made of organic polymer such as polyimide (col. 6, lines 29-30) instead of the claimed fluororesin.

Tsukida et al. teach using a fluororesin coating for releasability (col. 5, lines 23-24).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with a fluororesin coating, in light of the teachings of Tsukida et al., in order to provide good releasability.

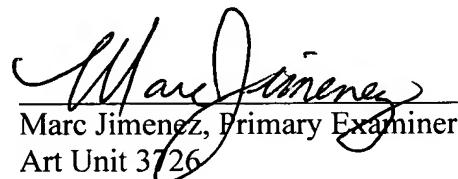
Regarding claim 8, the limitation “may be coated” is considered an alternative limitation that does not have to be included with the roller.

Art Unit: 3726

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Marc Jimenez, Primary Examiner
Art Unit 3726

MJ
8-14-06